

REMARKS/ARGUMENTS

This communication is in response to the Final Office Action dated August 27, 2007. Claims 1, 8, 11 and 12 have been amended. No new matter has been added. Claims 1, 3, 5 and 8-12 remaining pending in this application, with claims 1, 8, 11 and 12 being the only independent claims. Reconsideration in view of the arguments presented below is respectfully requested.

Claim Rejection under 35USC § 112, 1st

The Examiner rejected claims 1, 3 and 10 under 35 U.S.C. 112, first paragraph, because the claimed invention is not enabling due to lack of utility. Below Applicants traverse the rejection of the claimed invention for lack of utility under 35 U.S.C. §101. In view of such arguments establishing utility of the claimed invention, Applicants request that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

Claim Rejection under 35USC § 112, 2nd

The Examiner rejected claims 1, 3, 5, and 8-12 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claims 1, 8, 11 and 12 recite the working range of the neural network being determined by a convex envelope defined around training data. The Examiner asserts that “it is not disclosed what being ‘inside or outside the convex envelope’ or being within the ‘predetermined working range of the neural network’ (see Specification [0012]) means for the manufacturing process and data categories recited.”[August 27, 2007 Final Office Action: p. 3, paragraph 10]

Applicants respectfully disagree and assert that such limitations are not indefinite. Specifically, claim 1 states “working range is defined by the convex envelope formed by training input data records of the neural network.” Therefore, the training input data records of the neural network form a convex envelope or working range. {see Specification: Paragraphs [0015] & [0016]}

The convex envelope that defines the working range encloses or surrounds an area as formed by

training input data. Thus, an input data record will be disposed either inside (interior of the convex envelope) or outside (exterior of the convex envelope) as formed by training input data.

Similarly, whether an input data record is in working range is dependent once again on the convex envelope. An input data is within the predetermined working range if it is inside (interior of the convex envelope) but outside the predetermined working range if it is outside (exterior of the convex envelope). {see Specification paragraph [0019] and limitation (c) of claim 1 which states “delivering result that input data record is inside or outside the working range of the used neural network through confirming that the input data is respectively inside or outside the convex envelope.”} While “the input data record” for which the determination is made as to whether it lies within or outside the working range (convex envelope) is clearly recited in claim 1 as “being manufacturing process data selected from the group comprising data related to the materials used, composition data, parameters of the production system, pressure data and/or temperature data.”

The same definite interpretation is to be applied to similar limitations found in independent claims 8, 11 and 12.

Accordingly, Applicants submit that these limitations are definite and thus withdrawal of the outstanding rejections under 35 U.S.C. §112, second paragraph, with respect to claims 1, 3, 5 and 8-12 is requested.

Claim Rejection under 35USC § 101

The Examiner rejected claims 1, 3, 5 and 8-12 on the grounds that the claimed invention is directed to non-statutory subject matter: abstraction, algorithm and/or software per se. Specifically, the examiner asserts that the claims constitute a 101 judicial exception (e.g., algorithm) while claiming no physical transformation and returning no substantial and specific result.

In the outstanding Office Action, the Examiner states “While the data processed by the algorithm may be real-world data, the result is considered to be abstract as it is being ‘inside or outside the

convex envelope' could mean anything for the possible manufacturing process for the data categories recited." {August 27, 2007 Final Office Action: page 5, lines 5-7}

Applicants have amended the claims for clarification to recite the practical application of the claimed invention to be a method for improving a neural network prediction for an input data record being manufacturing process data selected from the group comprising data related to materials used, composition data, parameters of the production system, pressure data and/temperature data. This amended language finds support in paragraphs [0007] & [0012] of the specification. Furthermore, claim 1 also clarifies in limitation (d) that the neural network prediction is improved "by disregarding the input data record if it is outside the working range of the used neural network and processing by the used neural network the input data if it is inside the working range." Support for this new limitation is found in paragraph [0103] of the specification. Applicants submit that claim 1, as amended, now clearly recites a practical application for the present claimed invention thereby overcoming the rejection under 35 U.S.C. §101.

Independent claims 8, 11 and 12 have been similarly amended and thus also have overcome the rejection under 35 U.S.C. §101.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition thereof. The Assistant Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,
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